

UGM Develops New Rotavirus Vaccine

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Universitas Gadjah Mada (UGM) has developed new rotavirus vaccines, RV3-BB, which gives early protection to infants and young children from diarrhea caused by rotavirus.

The vaccine developed by researchers from Faculty of Medicine, Public Health, and Nursing UGM as well as from Murdoch Children's Research Institute (MCRI) Australia has proved to be able to reduce inflammation in severe rotavirus gastroenteritis in infants.

Reportedly, rotavirus still causes severe diarrhea. Globally, rotavirus has caused fatalities of 215,000 toddlers. In Indonesia the disease is predicted to have caused 10,000 child mortality, 200,000 in-patients, and 600,000 out-patients each year.

Regional chairperson for gastroenterology and rotavirus research in Indonesia, Prof.dr. Yati Soenarto, Sp.A (K), Ph.D., said rotavirus vaccine was introduced by Ruth Bishop from MCRI in 1973. Later on, UGM and MRCI were developing new types of RV3 oral to be given to new babies.

"The rotavirus vaccines circulating today can only be given to babies over six weeks old, so new



babies are vulnerable to rotavirus infection. This new vaccine can be given to all babies soon after they are born,” she said in a press conference on Tuesday (22/2) at the Faculty.

Yati said that by giving the vaccine after the birth can give protection to the baby against such fatal disease at the third month. Not a few babies missed the vaccines opportunity so they have very high risk to severe rotavirus.

The new vaccine has been clinically tested in 25 health community centres and hospitals in Sleman, Yogyakarta, and Klaten. The vaccines is given to 1,649 babies in the first five days until 18 months in three single dosages.

“After three dosages of RV3-BB are given during birth, 94 percent of babies are protected in the first year against acute rotavirus gastroenteritis and 75 percent of babies protected until 18 months old,” said the main researcher of the clinical test of rotavirus vaccine in Indonesia, dr. Jarir At Thobari, Ph.D.

The test was the final phase and achievement of research that had begun since the 1990s in Australia. The first phase research was done in Melbourne and New Zealand and it proved to know immune system response to vaccines and ability to protect severe diarrhea in babies. Furthermore, research was done in Indonesia since 2013 to 2016 to know the efficacy of the vaccine in reducing rotavirus gastroenteritis in babies.

It is planned the vaccine will be produced massively in 2020, collaborating with PT. Bio Farma. “RV3-BB vaccine is expected to get into the National Immunisation Programme,” said Jarir.

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